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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/632,343      | 08/01/2003  | John B. Letts        | P02030US2A(336)     | 3593             |

7590 04/08/2005

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| EXAMINER       |              |
|----------------|--------------|
| COONEY, JOHN M |              |
| ART UNIT       | PAPER NUMBER |
| 1711           |              |

DATE MAILED: 04/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                               |                              |  |
|------------------------------|-------------------------------|------------------------------|--|
| <b>Office Action Summary</b> | Application No.<br>10/632,343 | Applicant(s)<br>LETTS ET AL. |  |
|                              | Examiner<br>John m Cooney     | Art Unit<br>1711             |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. <u>0405</u> . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                                |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2 shfs</u> . | 6) <input type="checkbox"/> Other: ____.   |

*HL*

*ze*

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-20 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for separate and distinct blowing agents and low-boiling inert gases, does not reasonably provide enablement for methods wherein the employed blowing agent and low-boiling inert gas are the same material. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims. The materials "blowing agent" and "low-boiling inert gas" may be the same component, and applicants' supporting disclosure is not enabling for both components to be the same material.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-7, 10-13, 16-18 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "low-boiling" in claims 1-7, 10-13, 16-18, and 20 is a relative term which renders the claim indefinite. The term "low-boiling" is not defined by the claim, the

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specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Claims are confusing as to intent because it can not be determined what boiling points would constitute a “low-boiling” point and which boiling points would constitute a “high-boiling” point. Therefore, it can not be determined what materials are encompassed by applicants’ claim element “a low-boiling inert gas”.

Claims 10-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

When appended to an otherwise definite expression, “type” so extends the scope of the expression as to render it objectionably indefinite. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wishneski et al.(5,264,464) in view of Volkert et al.(5,278,195).

Wishneski et al. discloses preparations of isocyanate-based rigid foams prepared by contacting streams of isocyanate component and a polyol component wherein contacting takes

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place in the presence of blowing agent and nitrogen gas to enhance the foaming action and wherein the materials are applied to a surface which meet the criteria of "laminator" as defined by the claims (see the entire document). Wishneski et al. teaches control of the flow rates of its reactants (see column 9 lines 32-34), but the disclosure differs from applicants' claims in that it is concerned with the formation of polyurethane foams. However, Volkert et al. discloses that control in the relative amounts of reactive materials dictates formation of isocyanurate foam products rather than polyurethane foam products when preparing isocyanate based foams (see column 17 lines 17-35, as well as, the entire document). Additionally, Volkert et al. teaches the motivation of achieving increased flame retardancy as one reason to desire such a modulation in reactant amounts. Accordingly, it would have been obvious for one having ordinary skill in the art to have modified NCO indexes in the manner taught by Volkert et al. within the practice of the processes of Wishneski et al. for the purpose of increasing fire retardancy in the articles realized in order to arrive at the processes of applicants' claims with the expectation of success in the absence of a showing of new or unexpected results.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raynor et al.(3,882,052) in view of Volkert et al.(5,278,195).

Raynor et al. discloses preparations of isocyanate-based rigid foams prepared by contacting streams of isocyanate component and a polyol component wherein contacting takes place in the presence of blowing agent and nitrogen gas to enhance the foaming action and wherein the materials are applied to a surface which meet the criteria of "laminator" as defined by the claims (see the entire document). Raynor et al. teaches control of the flow rates of its

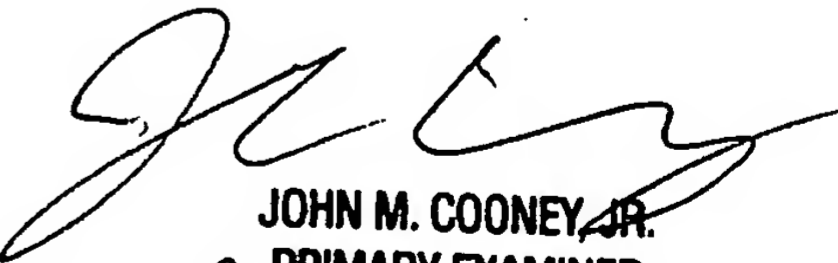
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reactants (see column 6 line 65 et seq.), but the disclosure differs from applicants' claims in that it is concerned with the formation of polyurethane foams. However, Volkert et al. discloses that control in the relative amounts of reactive materials dictates formation of isocyanurate foam products rather than polyurethane foam products when preparing isocyanate based foams (see column 17 lines 17-35, as well as, the entire document). Additionally, Volkert et al. teaches the motivation of achieving increased flame retardancy as one reason to desire such a modulation in reactant amounts. Accordingly, it would have been obvious for one having ordinary skill in the art to have modified NCO indexes in the manner taught by Volkert et al. within the practice of the processes of Raynor et al. for the purpose of increasing fire retardancy in the articles realized in order to arrive at the processes of applicants' claims with the expectation of success in the absence of a showing of new or unexpected results.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Cooney whose telephone number is 571-272-1070. The examiner can normally be reached on M-F from 9 to 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck, can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
JOHN M. COONEY, JR.  
PRIMARY EXAMINER  
Cooney 1711